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## **The relationship between food banks and food insecurity: insights from Canada**

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**Abstract:**

Food banks have become the first line of response to problems of hunger and food insecurity in affluent nations. Although originating in the USA, food banks are now well established in Canada, Australia, and some Nordic countries, and they have rapidly expanded in the United Kingdom and other parts of Europe in the past two decades. Defined by the mobilization of food donations and volunteer labour within communities to provide food to those in need, food banks are undeniably a response to food insecurity, but their relevance to this problem is rarely assessed. We drew on data from the 2008 Canadian Household Panel Survey Pilot to assess the relationship between food bank use and household food insecurity over the prior 12 months and examine the interrelation between food insecure households' use of other resource augmentation strategies and their use of food banks. We found that most food insecure households delayed bill payments and sought financial help from friends and family, but only 21.1% used food banks. Food bank users appeared to be more desperate: they had substantially lower incomes than food insecure households who did not use food banks and were more likely to seek help from relatives and friends and other community agencies. Our findings challenge the current emphasis on food charity as a response to household food insecurity. Measures are needed to address the underlying causes of household food insecurity.

**Key Words:**

Food insecurity, food banks, household resources, Canada

## 1    **Introduction**

2    Although originating in the United States (Daponte and Bade 2006, Poppendieck 1994,  
3    Poppendieck 1998), food banks are now well established in Canada, Australia (Booth and  
4    Whelan 2014), and some Nordic countries (Salonen 2016, Silvasti and Karjalainen 2014), and  
5    have rapidly expanded in the United Kingdom (Loopstra et al. 2015, Dowler and O'Connor 2012,  
6    Lambie-Mumford and Dowler 2014), other parts of Europe, and Asia (Martin-Fernandez et al.  
7    2013, Gonzalez-Torre and Coque 2016, 2014) in the 2000s. While the organizational structures,  
8    operations, and levels of government investment in food bank operations vary across countries,  
9    these initiatives are broadly defined by the mobilization of food donations and volunteer labour  
10    within communities to provide food to those in need. In this sense, they are inarguably responses  
11    to local concerns about food insecurity. Yet, the appropriateness of food banks as a response to  
12    problems of household food insecurity is highly contested. These arguments typically center on  
13    the relationship between the rise of food charity and the diminution of social protection programs  
14    and concerns about how food charity initiatives undermine the fundamental right to food  
15    (Dowler 2003, Dowler and O'Connor 2012, Perez de Armino 2014, Riches 2002, Lambie-  
16    Mumford 2017, De Schutter 2012, Poppendieck 1998, 2014). Less often considered is how well  
17    food banks even do at addressing the problem they aim to tackle in their communities:  
18    preventing individuals and families from going without food. Building on previous work  
19    examining the discrepancy between food insecurity and food bank use, this study explores the  
20    relationship between household food insecurity and food bank use in Canada. By examining use  
21    of food banks among food insecure households alongside several other resource augmentation  
22    strategies, this study asks, are food banks a form of help sought by food insecure households?

## **An overview of food banks in Canada**

Food banks began to proliferate in Canada in the 1980s as communities rallied to provide charitable food assistance to people affected by the economic recession (Riches 1986). Although initially construed as temporary food relief efforts, food banks rapidly became entrenched. Much like the trajectories charted in other countries (e.g., (Daponte and Bade 2006, 2014)), the establishment and institutionalization of food banks in Canada is intimately intertwined with fundamental changes to social protection programs in this country. Food banking grew rapidly through the 1980s and 1990s, in tandem with social policy reforms that weakened the provision of income assistance and other publicly-funded supports for Canadians facing financial hardships (Riches 2002, Tarasuk and Davis 1996). The number of agencies and organizations providing charitable food assistance appears to have plateaued in recent years, perhaps reflecting the ‘saturation’ of communities with this model of programming. Since 2010, the number of people receiving food hampers from food banks has remained relatively stable (Food Banks Canada 2016). The latest ‘HungerCount’ published by the national association of food banks indicates that in March 2016, 863,492 people received food hampers from food banks and almost 4.5 million meals were served through affiliated charitable meal programs (Food Banks Canada 2016).

In Canada, food banks are voluntary, extra-governmental programs, mostly run by faith groups, public sector organizations (e.g., multiservice agencies, community health centres), but also with some programs run by independent community food organizations (Tarasuk et al. 2014). Irrespective of who is running them though, the work of food banks is heavily reliant on donations of food and money and volunteer labour, and most food bank operators report that the

needs of their clientele continually outstrip the availability of food assistance (Tarasuk et al. 2014). Food is sourced from food manufacturers, producers, and retailers, and through regular solicitations for donations from the general public ('food drives'). Much of the collection and distribution of donated foods in communities is coordinated at a local or provincial level by centralized distribution agencies that are in turn aided by a national 'food sharing' program coordinated by Food Banks Canada (Food Banks Canada 2012b). In addition, many program operators solicit food donations from local businesses and community groups in their efforts to better respond to demands for assistance (Tarasuk et al. 2014).

The role of government in relation to food banks has been primarily facilitative. There are no government programs that supply food or core funding to food banks, but many agencies receive government support through infrastructure funding, grants for specific programs (e.g., employment training, prenatal programs, community kitchens), and legislations continue to be enacted to encourage donations to food bank (McIntyre, Lukic, et al. 2016, McIntyre, Patterson, et al. 2016). Every province and territory has now passed a 'Good Samaritan' law absolving corporate donors of liability for the health and safety of the food they donate (Food Banks Canada 2017), and several provinces have recently begun to offer tax credits to local producers who donate unsold foods to community agencies (e.g., Ontario's Local Food Act). There are also ongoing lobby efforts for federal tax credits for corporate donors, a policy that proponents argue will also help reduce food waste in Canada (National Zero Waste Council 2017). While such initiatives highlight the continued support for food banks, their effectiveness as a response to problems of food insecurity in this country continues to be questioned.

## **The relationship between food banks and food insecurity in Canada**

Population-level assessments of food insecurity show that it is a serious and growing problem, now affecting almost one in eight Canadian households (Tarasuk, Mitchell, and Dachner 2014, Tarasuk et al. 2017). Yet, comparisons of household food insecurity prevalence estimates with national and provincial statistics on food bank usage suggest that only a small fraction of food insecure households use food banks (Loopstra and Tarasuk 2015). In 2012, the most recent year for which we have nationally representative data on food insecurity, 4,005,000 individuals were living in households reporting some degree of food insecurity (Tarasuk, Mitchell, and Dachner 2014), but only 882,188 people were reported to be receiving assistance from food banks (Food Banks Canada 2012a). As shown in Figure 1, this large discrepancy between the number of individuals living in food insecure households and those assisted by food banks in 2012 is observed for all years that data on national estimates of food insecurity are available (2007, 2008, 2011).

Surveys of food bank users have long documented profound levels of food insecurity among those who seek assistance (Farahbakhsh et al. 2017, Ford, Lardeau, and Vanderbilt 2012, Matern and Iman 2016, Roncarolo et al. 2014, Rush et al. 2007, Roncarolo, Bisset, and Potvin 2016, Tarasuk and Beaton 1999, Tsang, Holt, and Azevedo 2011), but few studies have assessed the prevalence of food bank use among food insecure households. Three Canadian population surveys conducted in the 1990s revealed that one-third or fewer households with some indication of food insecurity used food banks (McIntyre, Connor, and Warren 2000, Rainville and Brink 2001, Vozoris and Tarasuk 2003). Food bank use was most prevalent among households reporting severe food insecurity, but even among this group, fewer than half reported any use of

food banks (Rainville and Brink 2001). Households' use of food charity has not been assessed in more recent population surveys, but a comparison of cross-sectional samples drawn from the 1997 and 2007 National Longitudinal Survey of Children and Youth revealed no change in the proportion of families reporting child hunger who used food banks (34.4% in 1997 and 32.8% in 2007) (McIntyre et al. 2012).

These findings beg the question of why so many people struggling to afford food do not seek charitable assistance, and what dictates whether someone does or does not use a food bank. Our earlier in-depth examination of food insecurity and food bank use among a sample of low-income households in Toronto offered some insights (Loopstra and Tarasuk 2012). Among food insecure households, only 28% had used food banks in the previous 12 months. The probability of households using food banks rose with severity of food insecurity and receipt of welfare benefits, and declined with household income. Those reporting no food bank use were asked an open-ended question about why they had not received assistance from a food bank. Based on these responses, two main themes emerged. Some households reported a lack of knowledge or lack of access to food banks, describing being turned away from food banks, having difficulty getting to food banks, or not knowing how to access them, among other access barriers. But the more commonly indicated theme was one that captured resistance to food bank use. Responses suggested that respondents felt they did not want or need to use food banks and that food banks would only be used as a last resort. Households expressed that they were able to manage, even though the experiences of food insecurity they reported suggested otherwise. Additionally, we observed that these same households engaged in a myriad of other strategies to minimize food deprivation, including compromising the quality of their housing (Kirkpatrick and Tarasuk 2011)



and food (Dachner et al. 2010, Loopstra and Tarasuk 2013a) and delaying bill and rent payments and selling or pawning possessions (Loopstra and Tarasuk 2013a, Kirkpatrick and Tarasuk 2009). However, the generalisability of these findings is limited, as all households participating in this study lived in deprived neighbourhoods in Toronto.

Given evidence that food banks remain a primary response to food insecurity in Canada and across many other high-income countries, it is critical to understand their reach and relevance for the populations that they aim to target. In particular, it is important to understand where food bank use fits within the range of other strategies households employ when faced with increasingly severe resource constraints. If, as suggested by prior Canadian research, food banks are a strategy of last resort, avoided by most food insecure households, this could indicate the need for different kinds of community responses and a redirection of political support to actions that better align with the expressed needs of food insecure households. Drawing on data from a novel survey of household resources and material deprivation conducted in four Canadian provinces in 2008, our objectives were to i) determine the relationship between household food insecurity and various resource augmentation strategies including food bank use and ii) examine how the use of food banks relates to other resource augmentation strategies among households reporting food insecurity.

## **Methods**

The Canadian Household Panel Survey (CHPS) Pilot was conducted by Statistics Canada in the provinces of Ontario, Quebec, Saskatchewan and New Brunswick between October 15 and December 31, 2008 (Heisz 2013). The target population was all Canadians living in households,

139 excluding people living on Indian reserves or crown lands, members of the Canadian Forces and  
140 of religious or communal colonies, and individuals living in institutions. The samples drawn  
141 from each of the four provinces were roughly of equal size. Altogether, 2,122 households were  
142 eligible for interview. The response rate was 76%, yielding a total sample of 1606 households.

143  
144 The survey was administered through non-proxy computer assisted personal interviews, with  
145 27% of interviews conducted over the telephone because a face to face meeting could not be  
146 scheduled. In addition to basic demographic information, a person identified to be  
147 knowledgeable about all household members was asked questions on housing, childcare use and  
148 monthly expenditures on key items, as well as questions on food insecurity, material deprivation,  
149 and financial security. Household income was obtained from income tax records if access was  
150 granted to Statistics Canada, or it was estimated from the incomes reported in the interview of  
151 each household member 15 years of age and above. For the purposes of this study, we focus on  
152 the food insecurity indicator and the financial security module, which comprised six questions  
153 about resource augmentation behaviours, including the use of food banks.

154  
155 One question adapted from the USDA Household Food Security Survey Module (HFSSM) was  
156 included in the CHPS, namely, “In the last 12 months, have you and your family ever had to eat  
157 less because you did not have enough money to buy food?” For the purposes of this study,  
158 households responding “yes” to the question were considered food insecure. Based on the  
159 sequencing of the 18 items of the HFSSM and the severity continuum they captured, the question  
160 included in CHPS is adapted from the eighth item, which reflects a relatively severe level of food  
161 insecurity (Bickel et al. 2000, Hamilton et al. 1997, Health Canada 2007). Food bank use was

assessed as ever having used a food bank in the last 12 months. Other resource augmentation strategies assessed over the past 12 months included missing “paying an electricity, gas or utility bill on time”, “paying rent or mortgage on time”, pawning or selling something, asking for “financial help from friends or family”, asking for “help from welfare or community organizations”, all with a clause attached to establish that the behaviour was “because you were short of money”. For the purposes of this study, we excluded all households with missing data for food insecurity or food bank use, yielding an analytic sample of 1593.

To present the socio-demographic profiles of the food secure and food insecure households in the sample, characteristics commonly known to be associated with household food insecurity in Canada (Health Canada 2007, Li, Dachner, and Tarasuk 2016, McIntyre et al. 2015, Loopstra and Tarasuk 2013b) were described using proportions and means. The characteristics included household composition, after-tax income adjusted for household size, housing tenure, living in an urban or rural area, and four binary variables describing whether the household received any income from employment, social assistance, worker’s compensation or Employment Insurance, and a public or private retirement plan (i.e., seniors’ incomes). This description enabled us to examine whether the differences in the socio-demographic profiles of the food secure and food insecure households based on the one question included in the CHPS were consistent with differences documented using the 18-item HFSSM, the measurement tool used to monitor household food insecurity in Canada (Health Canada 2007, Tarasuk, Mitchell et al. 2014).

To determine the relationship between household food insecurity and various resource augmentation strategies, logistic regression models were conducted to estimate predicted

probabilities and odds ratios of using food banks and five other strategies by food secure and food insecure households. The models controlled for whether the household lived in a rural or urban area, since living in smaller and more remote areas may reduce access to food banks and limit households' options in terms of other resource augmentation strategies. To address the second objective of our study, logistic regression models were conducted among the food insecure households to estimate predicted probabilities and odds ratios of using each of the five resource augmentation strategies by those who used food banks and those who did not, while controlling for rural or urban area of residence. Predicted probabilities and odds ratios represent absolute and relative measures of association, respectively. While odds ratios are commonly used to present the strength of an association, they may overestimate the magnitude of the association when the outcome is uncommon (King, Harper, and Young 2012). In the presentation of results, we focus on the predicted probabilities for two reasons. First, two resource augmentation strategies, food bank use and pawning or selling possessions, were reported by only a small fraction of the sample compared to the other strategies, meaning that the magnitude of the association between these two uncommon strategies and food insecurity is likely inflated (King, Harper, and Young 2012). Second, and most importantly, the predicted probabilities enable us to contrast the likelihood that food insecure households use a food bank with their likelihoods of using the other five resource augmentation strategies. All the analyses were conducted with Stata 15, and the significance level was set at  $p < 0.05$ .

## **Results**

Table I presents the socio-demographic characteristics of the entire sample and by food insecurity. Household composition differed between the food secure and food insecure

households, with the latter more likely to be lone female parent families and unattached individuals, and less likely to be couples without children. Food insecure households had, on average, lower after-tax household income than their food secure counterparts. In terms of income sources, food insecure households were more likely to have received incomes from social assistance and worker's compensation or Employment Insurance, but less likely to have received senior's incomes. Although a larger proportion of food insecure households reported incomes from employment compared to food secure households, the difference did not reach statistical significance ( $p = 0.096$ ). Food insecure households were more likely to rent rather than own their dwelling and to live in an urban area, but the latter did not reach statistical significance ( $p = 0.098$ ). The socio-demographic profiles of the food insecure households in this sample were consistent with the profiles observed in population-based studies using the 18-item HFSSM (Health Canada 2007, Li, Dachner, and Tarasuk 2016, McIntyre, Bartoo, and Emery 2012, McIntyre et al. 2015, Loopstra and Tarasuk 2013b).

Overall, 3.1% of households reported using a food bank in the past 12 months, and 65.3% of these were food insecure. Figure II presents the predicted probabilities of using food banks and the other resource augmentation strategies among food insecure and food secure households. The odds ratios from these logistic regressions are presented in Supplementary material I. The predicted probabilities of using each one of the six resource augmentation strategies were significantly higher among the food insecure households (all  $p$  values  $<0.0001$ ). The most common strategy employed by food insecure households was asking for financial help from friends and family (59.1%; 95% CI: 51.2-66.9), followed by missing a bill payment (47.7%; 95% CI: 39.8-55.7), asking for help from welfare or community organizations (29.5%; 95% CI: 22.2-

36.7), missing rent or mortgage payment (28.0%; 95% CI: 20.9-35.2), using food banks (20.6%; 95% CI: 14.2-27.1), and pawning or selling possessions (19.6%; 95% CI: 13.2-25.9). Based on the overlap of the 95% confidence intervals of the predicted probabilities, using a food bank appeared as common as pawning or selling possession, missing rent or mortgage payment, and asking help from welfare or community organizations, but less common than missing bill payment or asking for financial help from friends and family.

When examining the number of resource augmentation strategies used, 84.0% of food insecure households used one or more of the six resource augmentation strategies examined compared to 15.6% of food secure households. Among the 20.0% of food insecure households that reported using only one of the six resource augmentation strategies, the most common strategies were missing a bill payment and asking for financial help from friends or family followed by asking help from organizations, whereas the least common strategies were pawning or selling possessions, missing a rent or mortgage payment and using a food bank.

Only 21.1% of food insecure households reported using food banks. On average, food insecure households using food banks had significantly lower after-tax income adjusted for household size (\$14,700; SD: 9,722) than those who reported no such use (\$26,872; SD: 13,635). Figure III presents the predicted probabilities of using different resource augmentation strategies among food insecure households who used food banks and those who did not. The odds ratios from these logistic regressions are presented in Supplementary material II. There were no significant differences in the predicted probabilities of missing a bill payment, missing rent or mortgage payment, and pawning or selling possession between these two groups. However, households

who used food banks were more likely to have asked for financial help from friends and family ( $p = 0.001$ ), and for help from welfare or community organizations ( $p < 0.0001$ ) compared to those who did not use food banks.

## **Discussion**

While food banks remain the primary public response to food insecurity in Canada, they represent one of multiple strategies employed by households who are food insecure as they try to manage with scarce financial resources. Consistent with other Canadian studies (Loopstra and Tarasuk 2012, Roncarolo et al. 2014, Roncarolo, Bisset, and Potvin 2016, Tarasuk and Beaton 1999), our results confirm that most people using food banks are moderately or severely food insecure, as indicated by reporting having to reduce their food intake due to a lack of money for food in the past 12 months. But, we also confirm the finding of earlier studies (Loopstra and Tarasuk 2012, McIntyre, Connor, and Warren 2000, Rainville and Brink 2001, Vozoris and Tarasuk 2003) that most food insecure households do not report using food banks. Using a food bank is the exception, not the norm. Despite the long history of food banks in Canada, our results do not suggest any greater acceptance of these programs among food insecure households than was observed in the 1990s; using a food bank remains a strategy of ‘last resort’.

We found that food insecure households were much more likely to delay bill payments and to ask for financial help from friends and family than to access a food bank. Previous studies have similarly demonstrated that food insecurity is associated with a broad spectrum of ‘coping strategies’ (Loopstra and Tarasuk 2013a, McIntyre et al. 2012, Rainville and Brink 2001) and that using a food bank is much less common than other behaviours like delaying bill payments

(Kirkpatrick and Tarasuk 2009, Rainville and Brink 2001). Among our sample, food bank use was as common as asking for help from welfare or community organizations, delaying rent payments and pawning or selling possessions, but fewer than one in three food insecure households reported using these strategies.

The resource augmentation strategies most commonly reported by food insecure households, asking for financial help from family or friends or delaying bill payments, were private, independent actions, involving the accrual of debt. While delaying the payment of utility bills and rent or mortgage could have serious ramifications for households in the long-run, these strategies involve substantial sums of money (Fafard St-Germain and Tarasuk 2018) and thus stand to have a greater impact on household finances in the short term than could be gained from using a food bank, where the amount and selection of food distributed to clients is carefully rationed (Tarasuk et al. 2014)<sup>a</sup>. Additionally, these strategies allow households to avoid the social stigma that comes with seeking charity (Hamelin, Beaudry, and Habicht 2002, Loopstra and Tarasuk 2012, Middleton et al. 2018, Williams et al. 2012). However, such strategies cannot be invoked repeatedly. Households that have exhausted whatever capacity they have to manage financial hardships by borrowing from family and friends, incurring debts, or selling or pawning possessions have no option but to seek help from strangers.

Our finding that food insecure households who use food banks were as likely as other food insecure households to report delaying bill or rent payments or selling or pawning possessions, but more likely to seek help from relatives and friends and much more likely to turn to welfare offices or community agencies for assistance may speak to their greater desperation – an



inference supported by the substantially lower incomes of food bank users. Seeking help from food banks and welfare and community agencies are very public strategies, requiring households to proclaim their needs to total strangers and potentially subject themselves to scrutiny by agency staff and volunteers who must verify that each applicant's level of deprivation is sufficient to warrant whatever assistance they have to offer. Our earlier research with food insecure families suggested that these were major deterrents to using food banks for many people (Loopstra and Tarasuk 2012).

Although food bank use remains the primary public response to food insecurity in Canada and legislators continue to introduce tax credits and other measures in support of these institutions (McIntyre, Lukic, et al. 2016, McIntyre, Patterson, et al. 2016), our findings suggest that this singular focus on charitable food assistance is misplaced. Food banks may be serving some of the most desperate households, but they do not reach the vast majority of food insecure households. Moreover, while charitable food assistance undoubtedly offers some important relief to those who receive it, the limited assistance that food banks can provide to any one household means that their capacity to relieve conditions of severe food insecurity is limited. High levels of food deprivation charted among families using food banks indicate persistent problems of extreme deprivation, unresolved by food bank use (Loopstra and Tarasuk 2012). It may be more effective for community groups to work with government to provide public programs that provide debt relief or direct financial assistance to households unable to pay rent or utility bills. Several such initiatives already exist in Canada (e.g., Ontario's Low-income Energy Assistance Program (Ontario Energy Board 2018), Community Emergency Funds (Social Planning Council of Sudbury)), and our results suggest that they are well aligned with food insecure households'

own responses to financial hardships. Additionally, these programs can target basic consumption needs that comprise much greater proportions of the household's overall budget than food (Fafard St-Germain and Tarasuk, 2018). Consequently, such interventions could have a much greater and more lasting impact on household food insecurity than small amounts of charitable food assistance could. However, there is a need to evaluate such initiatives to ensure that the supports provided are sufficient to relieve problems of food insecurity and that the programs function in tandem with other public policies to foster long-term food security among vulnerable households.

Our study findings also lend support to calls for public policy interventions that more effectively address household food insecurity. Consistent with prior research, food insecure households in this study had significantly lower incomes, were more likely to rent than own their dwelling, and were more likely to be receiving social assistance, Employment Insurance or workers' compensation, compared to the food secure. Given evidence that household food insecurity is sensitive to federal and provincial policy interventions that improve the financial circumstances of low income households (Ionescu-Ittu, Glymour, and Kaufman 2015, Li, Dachner, and Tarasuk 2016, Loopstra, Dachner, and Tarasuk 2015, Tarasuk et al. 2018), policy makers' continued focus on measures to increase donations to food charities (McIntyre, Patterson, et al. 2016, McIntyre, Lukic, et al. 2016, National Zero Waste Council 2017) that most food insecure people do not use seems misguided. In recent years, Food Banks Canada and several other civil society organisations have made calls for social policy reforms to ensure that all households have sufficient incomes to meet the basic costs of living (Dietitians of Canada 2016, Food Banks Canada 2016, Food Secure Canada 2017). Community organisations, including those providing

frontline food bank services, can play an important role in advocating for evidence-based, upstream policy interventions.

Our findings add strength to earlier cautionary notes about the use of food bank utilization statistics as a proxy measure of the prevalence of household food insecurity in a community or country (Loopstra and Tarasuk 2015). While our results suggest that people using food banks are very likely to be food insecure, the opposite is not true. A similar discrepancy between food bank use and food insecurity has been repeatedly charted in the US (Coleman-Jensen et al. 2017), where food banking is also very well established. Additionally, a marked discrepancy between food bank use and food insecurity has been documented in France (Agence nationale de sécurité sanitaire de l'alimentation 2017). As food bank use is treated as a measure of food insecurity, particularly in countries that do not routinely monitor food insecurity (e.g., (Carter et al. 2010, Loopstra et al. 2015)), it is important to recognize the substantial underestimation associated with this variable. However, few studies have examined these discrepancies and interrogated the drivers of food bank use among food insecure households (Daponte 2000, Martin et al. 2003). Instead, most research in the U.S. (Duffy et al. 2009, Garasky, Morton, and Greder 2004, Hoisington, Shultz, and Butkus 2002, Kaiser et al. 2015, Robaina and Martin 2013, Will and Milligan 2015) and U.K. (Garthwaite, Collins, and Bamba 2015, Loopstra and Lalor 2017, Prayogo et al. 2017) has focused on the food insecurity experiences of food bank users. Such studies inadvertently draw attention away from the much larger problem of food insecurity and can lead to the characteristics of food bank users being used to describe the problem of food insecurity. However, as this and other studies from Canada have shown, households using food banks are a unique subset of the food insecure population. More research is needed in other

country contexts to understand who, among food insecure households, use food banks and whether reasons for people not using food banks, such as stigma and wanting to manage without help from charity (Loopstra and Tarasuk 2012), are also common in these country contexts.

Both the design of our analysis and interpretation of our results stand in stark contrast to a recent examination of food insecurity among a large sample of food bank clients in the US (Gundersen, Engelhard, and Hake 2017). We conceptualized the various behaviours measured here (including food bank use) as strategies used by food insecure households to augment scarce financial resources, consistent with the understanding of food insecurity as a managed process (Campbell and Desjardins 1989), but Gundersen et al. (2017) framed similar behaviours among food bank users as determinants of food insecurity. They found a higher probability of food insecurity among food bank users who failed to pay bills and used other ‘coping strategies’ such as selling or pawning possessions or seeking help from family and friends, and they interpreted the positive associations as an indication that helping households to change those behaviours could mitigate food insecurity (Gundersen, Engelhard, and Hake 2017). Neither our study nor that of Gundersen et al (2017) was designed to determine the time ordering of events (i.e., are households food insecure because they fail to pay their bills and accrue debt, or is their failure to pay bills indicative of the poverty that also underlies their food insecurity?), and both conceptualizations are potentially plausible.

It is important to recognize that our assessment of household food insecurity was based on a single question that captured a relatively severe level of deprivation. We were thus unable to examine households’ resource augmentation strategies in relation to the severity of their food

insecurity. Based on the results of a recent examination of reported food security among food bank users in the US (Heflin and Olson 2017), it seems likely that most of those who reported food bank use but were not classified as food insecure based on this single question were in fact experiencing some level of food insecurity. Undoubtedly, there is also variation in the chronicity and severity of food insecurity among those classified as food insecure based on our single question and that may have influenced their use of resource augmentation strategies. It is possible that households using food banks were experiencing more severe food insecurity than the food insecure households who did not report this strategy. Canadian research applying the full 18-item scale is needed to assess these potential differences.

Although the low prevalence of food bank use among food insecure households in this study is consistent with previous research (Vozoris and Tarasuk 2003, McIntyre, Connor, and Warren 2000, Rainville and Brink 2001, Loopstra and Tarasuk 2012), it is important to recognize the potential for underreporting of food insecurity, food bank use and the other resource augmentation strategies examined because of the social stigma associated with such indicators of deprivation. Ambiguity in the question about seeking help from ‘welfare and community organizations’ limited interpretation of this resource augmentation strategy. Additional limitations of our study relate to the size and nature of the survey sample. The CHPS included only four provinces, and our results cannot be considered generalizable to the population of the four provinces surveyed, because CHPS was a pilot survey used to assess the feasibility of a general panel survey in Canada and no sampling weights were estimated. Given that there was no subsequent cycle to CHPS, it is not possible to examine whether the association between food insecurity and food bank use or other resource augmentation strategies changed in more recent

years. However, national statistics on food bank use and food insecurity indicate minimal change over time in the substantial gaps between the number of Canadians living in food insecure and the number of those assisted by food bank (see Figure I).

## **Conclusion**

Food banks have been the only direct response to household food insecurity in Canada for more than three decades now, but our study confirms earlier research that challenges the premise that food banks use is a normative strategy to augment resources among food insecure households. We conclude with three remarks on the public health implications of our results and the prior Canadian research in this area. First, the low propensity of food insecure households to use food banks cautions against using statistics of food bank use to monitor household food insecurity within communities and countries. Second, policies and programs designed to promote and expand charitable food assistance as a means to mitigate food insecurity are misaligned with the reality of most food insecure households, and consequently likely to be ineffective at reducing the magnitude of the problem at the population-level. Lastly, long-term policy actions ultimately need to focus on the upstream determinants of household food insecurity. While more research is needed to elucidate the specific mix of policy interventions required to address the problem, emerging evidence supports the role of social policies that improve the adequacy and stability of household incomes in reducing the prevalence of household food insecurity in Canada.

## **Notes:**

437 <sup>a</sup>In their 2013 HungerCount, Food Banks Canada reported that most agencies tried to provide  
438 clients with five days' worth of food per month, but in that same report they noted that 38% of  
439 food banks were forced to cut back on the amount of food that they gave clients and 8% turned  
440 people away at times because they did not have enough food (Food Banks Canada 2013).

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**Figure I.** Number of individuals living in food insecure households and number of individuals assisted by food banks in March of the respective year<sup>a</sup>

<sup>a</sup> Number of individuals living in food insecure households estimated using the Canadian Community Health Survey 2007, 2008, 2011, 2012. Number of individuals assisted by food banks retrieved from the “HungerCount” report (Food Banks Canada 2012a).

**Table I.** Sociodemographic characteristics by food insecurity

**Figure II.** Predicted probabilities of reporting food bank use and other resource augmentation strategies by food secure and food insecure households<sup>a,b</sup>

<sup>a</sup> Predicted probabilities (95% confidence intervals) estimated while conditioning on observed values of living in rural or urban areas.

<sup>b</sup> Sample sizes differ slightly for some resource augmentation strategies due to missing responses to the questions.

<sup>c</sup> *p* value for the difference in the predicted probabilities between food secure and food insecure households.

**Figure III.** Predicted probabilities of reporting different resource augmentation strategies by food insecure households who used food bank and those who did not<sup>a,b</sup>

<sup>a</sup> Predicted probabilities (95% confidence intervals) estimated while conditioning on observed values of living in rural or urban areas.

<sup>b</sup> Sample sizes differ slightly for some resource augmentation strategies due to missing responses to the questions.

<sup>c</sup>  $p$  value for the difference in the predicted probabilities between food insecure households who used food bank and those who did not.